

BMHA Newsletter

BICYCLE MOBILE HAMs OF AMERICA



Volume 13, Number 1

Jan/Feb/Mar 2002

SHORT TAKE

Dressing for Cold Weather Riding...

by Scott Farrell, KE4WMF

I was looking forward to sending a cold weather guide that I received from Adventure Cycling. Unfortunately, I'm sitting in the ocean and don't have the article available to me. However, I have hundreds of miles of cold weather riding experience. Hopefully, I can use this experience to assist you in your winter riding, especially if this will be your first attempt at riding all winter.

The most common mistake lies with a rider's choice of clothing. The worst thing you can wear is something that is thick and heavy. Sure, you'll feel toasty-warm when you depart on your ride. But you'll find yourself sweating within 10-minutes, then wondering why you're cold and miserable less than halfway through your ride. Why would someone wearing something so warm be so cold? The key to staying warm is to stay DRY. This is accomplished by dressing in LAYERS of clothing. The bottom layer should be something that wicks moisture away from your skin. Although cotton is "the fabric of our lives," it is terrible at keeping us dry. Cotton absorbs moisture. Before you know it, your cotton T-shirt is wet and so are you. Wet skin leads to cold skin. Instead of cotton, wear a synthetic material such as polypropylene, AKA "polypro." There are brand names, such as "CoolMax," out there. Take a look at the fabric composition. It's just polypro and can often be found for less. The next layer CAN be a T-shirt, but another wicking layer is better. Personally, I wear thermals that I purchased in the sporting goods department in a popular retail store. These thermals are made of two thin layers. The first layer (*on my skin*) is 100% polypro. The next layer is 70% polyester and 30% wool. The polypro layer wicks the moisture from my body and transfers it to the next layer. This next layer simply suspends the moisture until it can be carried away by dry air. If wind-chill is an issue, a windbreaker can be used as an outer layer. Just make sure it has vents to let excess heat and moisture out. Layering is the principle behind GORETEX winter wear, which is nice, but expensive.

How many layers to wear depends on the rider. One rule of thumb is: "If you're warm in your first two miles, you're over-dressed." This rule has been a great guide for me. Sometimes I wear a synthetic garment with a T-shirt over it. Sometimes I skip the T-shirt and go with a windbreaker. When it's really cold, I go with three layers: the polypro/poly-wool thermal mentioned above, a polypro jersey, then a good windbreaker. If your windbreaker is truly windproof, you

shouldn't need to worry about wind-chill. Note that in all winter scenarios, the material against my skin is never cotton. People are amazed at "how little" I wear and still stay warm. My personal record on an 11-mile commute is 17-degrees. All I was wearing was polypro thermals (*top and bottom*), lycra tights, a jersey, and a windbreaker.

But we must not forget our head, hands, and feet. Headgear ranges from head/ear bands to full head coverings. Thin items are best since they fit under helmets. The choice is yours. A windproof covering for your face is good as long as the back is breathable. Next, there many good winter cycling gloves on the market. Mittens are the warmest, but compromise your ability to shift and brake. A good compromise is a set of gloves that group your fingers into pairs. They are what I wear when it's below freezing. Last, but certainly not least, are your feet. First and foremost, do NOT wear cotton socks! Again, synthetic is best. If it's really cold, get windproof booties for your shoes. Sandwich bags on your toes will work, too. But don't wrap your whole foot in plastic or it won't breathe. Instead, it will get wet, then cold.

While my recommendations are not the definitive answer, hopefully they will give you a good starting place. Experimentation is the best way to find out what's right for you. Good Luck and Have Fun!!!

Dayton HamVention is on the Horizon...

The 51st Dayton HamVention is May 17-19, 2002. The 12th annual BMHA forum is set for Sunday, May 19th at 8:00 am. We have been allocated only one hour from 8:30-9:30; but, as in past years, we find the room is unoccupied at 8:00. We will meet informally in the room for the first half-hour. The official forum will start at 8:30 am. This arrangement gives us plenty of time to socialize and exchange ideas.

Detailed information of the forum events will appear in the next issue. The forum theme for the Dayton HamVention this year is "Emergency Communications". If you would like to volunteer as a speaker at our BMHA forum with a topic that follows this theme, please contact me at nf0n@arrl.net. I would like to follow the theme as closely as we can.

Plans are also forming for the Annual HamVention BMHA Bike Ride on May 18th. Make plans to bring your bike and ride with us. Watch the next issue for details.

See you at Dayton!

Mike Nickolaus, NF0N, Forum Moderator

EDITOR'S NOTEPAD

First Newsletter From Sea...

Things are going quite well at my new unit, Coast Guard Cutter Munro. We're currently on a counter-narcotics patrol near the Galapagos Islands in the Southeast Pacific. I can't tell you what we're doing out here, but it's a lot like a LONG chess game. The difference is that instead of being a player, we are a PIECE... one that's been sitting patiently. We'll already be home by the time you read this.

As predicted in my last *Editor's Notepad*, I began riding to and from work. The commute has been going well. My pace isn't as fast as I'd like it to be. But I still enjoy the ride and get a decent workout. Since September 11th, security at the base has been tighter. It's tighter to the point that the margin of time between driving and cycling is even narrower. Since I'm able to pass the cars that are waiting to be checked at the gate and I don't have to find a parking space on our tiny base, the difference between driving and riding is only about 5-minutes! Most people that pass me in my own neighborhood are just barely getting onto the ship when they see me ride up. It cracks me up!

The only thing I HAVEN'T been doing on my ride is using my ham radio. Part of the reason is because I'm only on the bike for about 25-minutes. By the time I get into a conversation, it's time to bail out because I'm either at the gate getting my ID checked or ready to "park" at the ship. Another reason is because I haven't spent a lot of time finding a local repeater that's actually busy at 5:45am. If any of you know of a morning net that I can hit with 2-watts from Alameda, CA, please feel free to e-mail me at StealthTDI@aol.com.

Back Issues Still Available.

You may purchase any of the 42 back issues of the BMHA Newsletter for \$1.50 each, postpaid. For info on the contents of the various issues send a business-size SASE to: BMHA, 316 East 32nd Street, South Sioux City, NE 68776-3512, and ask for the Index of Back Issues. This service available to members only.

Newsletter Preferences...

Of BMHA members who have expressed a preference for mail - vs. - e-mail delivery of the newsletter, 44 prefer email (of these, 2 have failed addresses) and 27 prefer U.S. mail.

Skip, AA6WK



BMHA NEWSLETTER

Editor: Scott Farrell, KE4WMF

President:

Bil Paul, KD6JUI

Vice President:

Skip La Fetra, AA6WK

Secretary/Treasurer

Mike Nickolaus, NF0N

Webmaster/Webhost

Skip La Fetra, AA6WK

Directors:

Russell Dwarshuis, KB8U John Einberger, N0MSA

Founder: Hartley Alley, NA0A (*Silent Key - May 2001*)

BMHA NEWSLETTER is a quarterly publication of the Bicycle Mobile Hams of America - Jan, Apr, July, and Oct. Permission is given to reproduce any of the material in this issue, provided the author is credited and the source is acknowledged as "from the Newsletter of the Bicycle Mobile Hams of America." Please send a clip to the address below. We welcome articles, suggestions, letters, announcements, photos, artwork - anything pertaining to the combining of bicycling with amateur radio.

The BMHA is affiliated with Adventure Cycling Association, the League of American Bicyclists, and *Worldradio*.

BICYCLE MOBILE HAMS OF AMERICA (BMHA)

c/o Mike Nickolaus, NF0N

316 E. 32nd St.

South Sioux City, NE 68776-3512

E-mail: BMHA-Webmaster@LaFetra.com

Website: <http://www.LaFetra.com/BMHA/>

ABOUT BMHA

For the information of our first-time readers

Bicycle Mobile Hams of America got its start when a 'Stray' in the June '89 QST magazine asked to "get in touch with hams who operate their radios while bicycle-mobile," signed by Hartley Alley, NA0A. Twenty-five hams responded, filled out questionnaires, and received a summary of the collected data.

In April of '90 we had our first BMHA Forum at the Dayton HamVention. We played to a packed house, overflowed the room, and added 54 names to our mailing list. Our eight subsequent forums have drawn increasingly larger audiences, and now BMHA is firmly established as a 'regular' at this world-renowned event.

This is the forty-third issue of our quarterly newsletter, which has become the clearinghouse for the exchange of info and ideas for the hams who go on the air from their bicycles.

BMHA membership puts you in touch with a friendly and helpful group of bike-riding hams. You'll make contacts through our membership directory, E-mail address list, E-mail discussion group, the annual meeting and Forum at the Dayton HamVention and other regional meetings, and of course through the BMHA Newsletter, which has articles on bike trips, antennas, other gear, operating tips, etc. A membership application is on the next-to-last page.

FEATURE ARTICLE

Q-R-Pedaling - K2/Gary Fisher Style

by John Cumming, VE3JC

For the past few years, I have been taking my QRP operation on the road, using a QRP-Plus and an Outbacker Perth antenna mounted on an aging mountain bike. This bicycle mobile set-up, described in past issues of the Quarterly, provided hundreds of kilometers of pleasant riding and many enjoyable QSO's. With all-band, multi-mode capability, and the many convenient features of the QRP-Plus, I would often think that my QRPedaling station was "just about the ultimate". It just couldn't get any better than this...



But then I adopted one of the early "test-builder" Elecraft K2's, and as the noise blanker, SSB, and autotuner options were added, I began to realize that the full-featured K2 would be an ideal bicycle mobile rig. My resolution to allow the K2 to lead a sheltered life was cast aside, and K2 #041 was soon learning to ride in the handlebar bag of my old bicycle. Cycling around the countryside on a very cold afternoon in mid-November, I was able to have an SSB QSO on 17 Meters with Ned, N4CX/bicycle mobile near Atlanta - a two-way K2 Bike mobile thrill! As I listened to Ned complain about the heat in Georgia, my own fingers were turning blue from the strong headwind. Holding a microphone in one frozen hand while steering and braking with the other, with the K2 stuffed awkwardly in the handlebar bag, I knew that modifications to my QRPedaling apparatus would be in order over the winter!

This short list of planned mods and upgrades turned into a major overhaul project when I picked out a Christmas present for myself - a slightly-used 1997 Gary Fisher Big Sur Mountain Bike, complete with front shocks, precision components, and twenty-four speeds ("Arhh Arhh Arhh," to quote Tim Allen). With more sophisticated brake levers and grip shifters, there was less real estate on the handlebars for attaching QRP gear; and with front suspension to cushion both rider and radio, the front wheel hub could no longer be used as an "anchor" point for any handlebar-mounted radio platform. With the January snow falling outside and my Gary Fisher hibernated in the shack, I set about to design new mounting arrangements for the QRP gear.

So how was I going to get the K2 to ride on my new Gary Fisher bike? It was apparent that the face of the K2 would have to be no further forward than the handlebars, and angled to direct audio from the top-mounted speaker towards the rider's ears (For safety reasons, I never wear earphones while riding the bike). To support the entire weight of the internal-battery-equipped K2 beyond the handlebars, a third "damped" anchor point, in addition to the two handlebar support points, would be essential.

The K2 sits on a platform constructed from 1/8" thick aluminum. The width of the platform is identical to the K2, while its depth is about one inch greater than the rig, permitting the rear of the platform to support the weight of the coax, paddle and external battery cables. Holes matching the K2's plastic feet have been cut in the platform, and anchors for bungee cords are installed on the platform's underside. The K2 is secured to the platform by aligning the rig over the foot holes, and securing with two wrap-around bungee cords. I use an additional nylon buckled "sleeping bag" strap for added security. I have also glued a piece of 1/8" cork over the front holes on the platform, as a "spacer" to accommodate the thickness of the collapsed tilt bail on the front of the K2.

To attach the rig platform to the bike, two aluminum blocks are U-bolted onto the handlebars. Four machine screws connect the platform to these blocks, via an L-shaped piece along the front of the platform. The "third leg" for supporting the rig platform is constructed from a 10" length of 3/4" aluminum tubing. This leg is attached to the bike's front forks above the shocks.

The rig mount illustrated provides a remarkably sturdy ride for the K2. My apprehension that it would be necessary to "lighten the load" by removing the K2's internal battery was unfounded. Even when fully loaded, the K2 remains firmly in place over the bumpiest roads, and steering control is not significantly compromised by the weight of the rig.

With the K2 and the Outbacker antenna system happily mounted on the Big Sur, I could begin to explore the advanced capabilities of my highly revised bicycle mobile system. The versatility of the K2's message memories was an immediate benefit. Using a pre-recorded "CQ" in auto-repeat mode, it is possible to enjoy the passing countryside, while waiting for someone to pull my signal out of the ether. Additional pre-recorded replies, such as "hr bicycle mobile, pwr 5 W", allow me to maintain the QSO while braking, shifting gears, or negotiating a tricky bend in the road.

The features provided by the auto-tuner were another welcome enhancement to my QRPedaling. Although the Outbacker Perth is "resonant" on all bands without the use of a tuner, the K2 allows me to check the SWR, and adjust the turns and whip length on the Outbacker for optimal match. The autotuner can be called into action when I want to move far off the resonant frequency in the selected band without having to dismount the bike for adjustment of the whip. Several successful QSO's have even been achieved while inadvertently using the autotuner with the Outbacker sitting on the wrong band tap!

Most of the K2's features and settings can be safely adjusted "on the fly." For example, selection of stored

messages or frequencies, changing modes or filter bandwidths, and adjustment of keyer speed and output power can all be accomplished while in motion on the bicycle. Obviously, more complex menu selections or actions requiring greater concentration should only be performed while stationary, away from the road. As with the QRP-Plus, the K2's dial lock feature is frequently used, especially when riding on rough roads.



The side-band capabilities of the K2 provide another dimension to bicycle mobiling. While CW is more effective at QRP levels with inevitably inefficient mobile antennas, enjoyable SSB contacts are certainly possible. I use a small foam-covered electret microphone attached to a length of aluminum ground wire as a boom mic. Because of ambient road noise, push-to-talk operation is required. But Elecraft's neat trick of using the "Dit" paddle input to key the PTT, and the compact "bulldog" paddles conveniently mounted on the end of my handlebar extension, combine to provide practically "hands free" PTT control.

The K2 has performed flawlessly in casual bicycle mobile operation over the past few months. During construction of the K2 options (and especially when installing the toroids on the autotuner), I had attempted to prepare the K2 for the rough road ahead. Insulated spacers were added under all tuner toroids and care was taken to minimize "play" and maximize clearance between components. To protect the rig from minor scrapes, and to provide some degree of weatherproofing, a custom soft vinyl case has been designed. The case's velcro-trimmed front cover can be quickly installed when the raindrops or snowflakes begin to fall.

Undoubtedly, I will continue to develop add-ons for the K2/Gary Fisher QRPedaling machine. Finding new ways to efficiently and creatively combine two wonderful hobbies is an ongoing challenge. Who says, "It can't get any better than this?"

(Due to space limitations, this article could not be presented in its entirety. The ENTIRE story, including more photos and credits, can be viewed in John's folder, labeled "VE3JC," at <http://groups.yahoo.com/group/BMHA/files/> ... ed.)

Membership Renewal Update

The response to the renewal appeal has been tremendous. Many of you have not only renewed, but have renewed for more than one year and some have donated a few more dollars to help the organization. As our Editor, Scott, mentioned in the last newsletter, we had not asked for renewals for some time due to the changeover in responsibilities and that during this change several newsletters had been missed. For those of you who have recently renewed, we will continue your membership starting with this issue forward. I guess you could call it amnesty, but it's only fair as we had not asked for renewals until now.

I have processed all of your letters for renewal and donations and have forwarded them to our webmaster for update into the BMHA membership database.

As you know, this is a volunteer non-profit organization and we use the membership funds carefully. All time spent by the Board members is volunteered time. Scott, our Editor, has been able to produce the paper newsletter at a very low cost with only the mailing cost that cannot be controlled. E-mail is used to it's maximum to further reduce our cost and all of us use our own computers for keeping track of membership lists and the BMHA website. All of this keeps the cost of dues to a minimum now and for the future.

I have received a number of applications from new members and I welcome you to the BMHA organization. Keep the new members coming.

For those of you who plan to renew, please use Scott's article and renewal application to forward to me. I appreciate the notes from many of you and look forward to reading them in your letter.

73,

Mike, NF0N
BMHA Secretary/Treasurer

"I want to renew my membership in BMHA for another year. I enclose \$ _____ for that purpose.

Name _____

Address _____ State _____

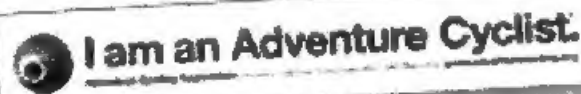
Send to: **BICYCLE MOBILE HAMS OF AMERICA**

c/o Mike Nickolaus, NF0N, 316 E. 32nd St.

South Sioux City, NE 68776-3512.

**Remember, BMHA is affiliated with
ADVENTURE CYCLING and LEAGUE of
AMERICAN BICYCLISTS!**

See the BMHA website for more information.



WEBMASTER'S CORNER

Greetings again from sunny California, where the weather has been wonderful but the Webmaster hasn't been riding. Too much #\$\$%@ work to do, and too busy helping my daughters grow up.

Shortly after this issue of the Newsletter goes to press, we hope to have a new feature at the website — online surveys which we will report (in real-time) on the website as well as in the next issues of the Newsletter. This will be your chance to find out what kind of antennas your fellow BMHAers are using, how many of us use speaker-mikes vs. headsets, what bands we work, etc.

Bookmark our survey page at <http://www.LaFetra.com/BMHA/Survey>. We hope to have our first survey (which will be a survey about what you'd like to be surveyed about) online before February 1st. If you can't wait that long, please e-mail me with your ideas for questions.

Until next issue,

Skip La Fetra, AA6WK
BMHA-Webmaster@LaFetra.com

About the BMHA Discussion List, from KE4WMF

The BMHA Discussion List at *YahooGroups!* has been relatively quiet lately. I'm sure many of us have been spending more time with our families. Holiday shopping has consumed some time as well. Still, the List has grown to over 130-members. We had a brief problem with "Drive-by Spamming," or unwelcome messages. This problem has been fixed by forcing new members to be moderated. Their messages now come to me, even at sea, before being distributed to the list. Legitimate messages are quickly posted. The moderation seems to be working fine. Please let me know if you experience problems with this feature.

AGING SERVICES FOUNDATION

In Memory of Hartley Alley...

As noted in Hartley's obituary (*BMHA Founder*), contributions can be made to the "Aging Services Foundation." BMHA donated \$100 in Hartley's name. I received the following letter in response.

Dear Mr. Nickolaus,

June 14, 2001

Thank you so much for your organization's donation of \$100.00 to the Aging Services Foundation of Boulder County in memory of Hartley Alley. Because no goods or services were provided in return for this contribution, the full amount of your gift is deductible. Please retain this letter as the receipt for your tax records.

We have designated your donation for the Respite Care Volunteer Program, one of the programs funded by the Foundation, as we believe that is what Mr. Alley would have wanted. Last year, volunteers with the respite program provided friendship and support to more than 100 older adults and their family caregivers, and we know that there are many others who could benefit from the program's services. Your thoughtful donation will help us reach them.

We extend our sympathy to you on the loss of Mr. Alley. He was a very special man, and we appreciate your gift in his name.

Sincerely,

Emily Cooper
Respite Services Coordinator

Membership Application

BICYCLE MOBILE HAMS OF AMERICA Date _____

c/o Mike Nickolaus, NF0N

316 E. 32nd St.

South Sioux City, NE 68776-3512

Individual \$10 _____ (US or Canada)	New member? _____	Renewal? _____
Family \$15 _____	Foreign \$15 _____	Donation \$ _____

Make check payable to BMHA, in US dollars or international money order.

Name _____ Call _____

Address _____ License Class _____

City _____ State _____ Zip _____

E-mail address _____ @ _____

Age _____ Most miles bicycled in one day _____

Would you like the BMHA Newsletter in paper copy via snail mail _____

OR via the internet as an e-mail attachment _____ (please check only one)

BMHA's Official Logo

The next time you need to order new QSL cards, don't forget to include the BMHA logo in your design. Here's the official logo, designed by Russ Dwarshuis, KB8U; and restored by Scott Farrell, KE4WMF.



BMHA NEWSLETTER

Bicycle Mobile Hams of America
c/o Mike Nickolaus, NF0N
316 E. 32nd St.
South Sioux City, NE 68776-3512

First Class Mail

LETTERS

From the Internet...

Speaking of bicycle mobile, I operated bicycle mobile QRP CW once and only once. I made one 40-meter CW contact with a ham in California (I was in Phoenix) at night. A cardboard box strapped to the handlebars contained 9 D-cells taped together and my Heathkit HW-7 3W CW transceiver.

The operation actually was not very much fun. I was on the street in front of my house, which is wide and doesn't get much traffic but to keep the bike moving, copy code in my head and send occasionally was not easy. I had a homebrew keyer paddle strapped to the right handle bar grip.

The bike was a 3-speed Huffy, believe it or not. Also, I had about an S-5 electrical static noise coming from my wheels. It was easy to diagnose the source because it was clearly rotation speed dependent and went away when I came to a stop.

My antenna was a homebrew helical whip made from a fiberglass (1/4-inch diameter by 8 ft) bicycle flagpole with the little triangle flag removed. I wound fine wire around the pole using a drill. The many turns were close wound at the bottom and much wider spaced at the top. I covered it with heat

shrink tubing after tuning it with an impedance bridge. The fiberglass was inserted into a small piece of pipe (nipple) that was attached to a 3/8-inch fine thread bolt for connection to a common mobile ham antenna mount. On the bike, the antenna was mounted to the wire rack above the rear tire. I had previously used this antenna in car mobile operation many times with good luck.

73 and keep on truckin' and talk'n!

Frank

Crossing the Atlantic - Bike to Bike...

I often work mobile while cycling using the IRLP Internet repeater linking system and often talk to the States and Canada. For more information on this exciting project, please visit my web site <http://www.qsl.net/g3zhi>

If your local repeater is connected to IRLP please call me on node 520. My QTH is Maltby, about 160 miles north of London

I look forward to talking to you from the UK bike to bike.

73,

Ian